FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/01/12
Date Received: 10/19/12
Project: 1198001.010.011, PO M09475, F&BI 210321
Date Extracted: 10/22/12
Date Analyzed: 10/30/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
CB330001-101912 210321-01	<50	<250	88
CB331707-101912 210321-02	<50	<250	97
Method Blank 02-1913 MB	<50	<250	80

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	CB330001-101912	Client:	Landau Associates
Date Received:	10/19/12	Project:	1198001.010.011, F&BI 210321
Date Extracted:	10/23/12	Lab ID:	210321-01
Date Analyzed:	10/23/12	Data File:	210321-01.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	105	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Copper	35.4
Zinc	38.8
Lead	1.77

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	CB331707-101912	Client:	Landau Associates
Date Received:	10/19/12	Project:	1198001.010.011, F&BI 210321
Date Extracted:	10/23/12	Lab ID:	210321-02
Date Analyzed:	10/23/12	Data File:	210321-02.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	105	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	55.5
Zinc	1,160
Lead	1.21

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Landau Associates
Date Received:	Not Applicable	Project:	1198001.010.011, F&BI 210321
Date Extracted:	10/23/12	Lab ID:	I2-720 mb
Date Analyzed:	10/23/12	Data File:	I2-720 mb.023
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	106	60	125
Holmium	100	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Zinc	<1
Lead	<1

Date of Report: 11/01/12
Date Received: 10/19/12
Project: 1198001.010.011, PO M09475, F&BI 210321

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	121	139 vo	58-134	14

Date of Report: 11/01/12
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Project: 1198001.010.011, PO M09475, F&BI 210321

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 210318-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<5	105	112	52-134	6
Zinc	ug/L (ppb)	50	26.5	101 b	110 b	51-142	9 b
Lead	ug/L (ppb)	10	<1	97	104	85-115	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	94	81-120
Zinc	ug/L (ppb)	50	95	82-120
Lead	ug/L (ppb)	10	88	84-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

210321

LANDAU ASSOCIATES

- [x] Seattle/Edmonds (425) 778-0907
- [ ] Tacoma (253) 926-2493
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ] _____

Please Bill Alaskan Copper ME 10/19/12 P.O. # MØ9475

Date 10/19/12 AT3

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Chain-of-Custody Record

Project Name Alaskan Copper Project No. 1198001.010.011

Project Location/Event 4Q12 SW Sampling

Sampler's Name Rosemary Trimmer ~~Joe Kalmar~~

Project Contact Jerry Thompson - Alaskan Copper, Landau

Send Results To Jerry Thompson, Joe Kalmar, Rosemary Trimmer

Testing Parameters

Turnaround Time
- [x] Standard
- [ ] Accelerated
- [ ] _____

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	Total Copper/Zinc/Lead (EPA 200.8)	Lab ID	Observations/Comments
CB330001-101912	10/19/12	10:35	H2O	2	X	X	01	
CB331707-101912	↓	11:05	↓	2	X	X	02	

Samples received at 4 °C

Observations/Comments:
- X Allow water samples to settle, collect aliquot from clear portion
- X NWTPH-Dx = run acid wash/silica gel cleanup
- ___ run samples standardized to _____ product
- ___ Analyze for EPH if no specific product identified

VOC/BTEX/VPH (soil):
- ___ non-preserved
- ___ preserved w/methanol
- ___ preserved w/sodium bisulfate
- ___ Freeze upon receipt

- ___ Dissolved metal water samples field filtered

Other _____

Special Shipment/Handling or Storage Requirements on ice

Method of Shipment deliver to lab

Relinquished by	Received by	Relinquished by	Received by
Signature Rosemary Trimmer	Signature	Signature	Signature
Printed Name Rosemary Trimmer	Printed Name	Printed Name	Printed Name
Company Landau Associates	Company	Company	Company
Date 10/19/12 Time 12:00	Date 10/19/12 Time 12:00	Date _____ Time _____	Date _____ Time _____

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 6/09

AKC-0003452

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 1, 2012

Joe Kalmer, Project Manager
Landau Associates
130 2nd Ave. S.
Edmonds, WA 98020

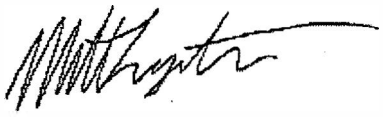
Dear Mr. Kalmer:

Included are the results from the testing of material submitted on October 19, 2012 from the 1198001.010.011, PO M09475, F&BI 210321 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Matthew Langston
Project Manager

Enclosures
NAA1101R.DOC